

Effects of male power and status on polygyny, extramarital sex, and parental investment

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Abstract

Previous research has found, with the support of biological theories, that males who are high-status or dominant in a society have more sexual partners available to them and, therefore, are more likely to engage in extramarital sex (EMS) and polygyny, and are likely to be less invested in child rearing. The current research used the Standard Cross-Cultural Sample to test two hypotheses: first, that high-status males would engage in more EMS and polygyny, and second, that in societies with higher rates of EMS, males would be the less-invested parent. Cross-tabulations were run on the SPSS statistics software for each hypothesis. The findings showed a greater occurrence of EMS and polygyny in male-dominated societies, supporting the first hypothesis. Findings relating to the second hypothesis were inconclusive—there did not appear to be a correlation between frequency of EMS and male parental-investment. The results of the present study are consistent with previous findings regarding male status, EMS, and polygyny and also demonstrates the need for further research investigating the relationship between male parental-investment and EMS.

Keywords

male power, extramarital sex, polygyny, male parental-investment

Introduction

The differences in power and status between males and females vary across societies. In most, however, males hold a high-status, dominant position whereas females are subject to a more subordinate position (Leung et al. 2012). In societies where males can have a high-status, high-status males are often perceived as more attractive by the opposite sex. This is a result of females viewing high-status males as better potential mates because, to them, high-status signifies a partner will be a good provider who has access to resources (Hill et al. 1987), can offer protection, and pass on favourable genes to offspring (Puts 2010). Therefore, males in a high-status position have more sexual partners available to them. This, in turn, means that it is likely that high-status males will engage in more extramarital sex (EMS) and/or have more spouses (i.e. be polygynous) than women or low-status males in the same society. The biological theory of sexual selection supports this assumption. The theory states that some individuals of a species gain an advantage over other members of the same sex because they possess characteristics which make them more appealing to the opposite sex, increasing their chances of reproductive success (i.e. having more offspring) (Hosken and House 2011). High-status and dominance in males can be considered to be one of the favourable characteristics that sexual selection theory alludes to, and the accompanying benefits—as perceived by females—factor into mate choice (a mechanism within the theory).

A consequence of high rates of EMS and polygyny in a society is uncertainty of paternity. According to biological theories (Puts 2010), males are traditionally the less-invested parent in child rearing; high rates of EMS and polygyny have been found to exacerbate its occurrence in nonhuman animal species (Liker et al. 2015). This report will explore the relationships between male status, EMS, polygyny, and parental investment in different human societies around the world.

I hypothesise that if males in a society have more status and power than females of the same society, more EMS and cases of polygyny will be found amongst them; this is due to a more favourable perception by females of their virility and potential as a mate. Multiple research findings summarised by Puts (2010) have shown a preference by females for males in a position of high-status, as this

indicates an access to resources. Anthropology Professor Elizabeth Cashdan (1996) suggests that the reason behind female's preference for high-status males is due to more than just an access to resources, and may additionally include benefits such as: her offspring inheriting favourable genes, her offspring being treated better by others, and the female herself may be less likely to receive unwanted attention from other males. A study by Hill et al. (2013) on a university campus investigated female students' perceptions of male students in terms of attractiveness and dominance. They also recorded the number of sexual interactions engaged in by male students. The results showed that males who were seen as more dominant figures on campus had more sexual encounters. Furthermore, dominance had more of an effect on number of sexual interactions than attractiveness did. Similar findings were obtained by Lammers et al. (2011) who investigated the relationship between gender differences in, and reason behind, power and infidelity in business professionals. It was found that power was positively correlated with infidelity and intentions of infidelity. An interesting find by Lammers et al. (2011) was that women in positions of power committed just as much adultery as men in positions of power, suggesting that power itself is a predictor of infidelity and gender plays little to no role.

As mentioned earlier, a consequence of increased rates of EMS and polygyny is lower levels of parental investment. A cross-cultural analysis by Quinlan and Quinlan (2007) found that acceptance of EMS in societies decreased as fathers became more involved with child rearing, which was measured through father's sleeping proximity to the child, and father's responsiveness to their crying infant. Quinlan and Quinlan's study however did not report actual EMS behaviour, only acceptability of. Studies which have investigated the relationship between EMS behaviour and parental investment by fathers have mostly been conducted on nonhuman animal species. Liker et al. (2015) investigated parental investment in 792 bird species. The findings of the study strongly supported the biological theory of parental investment (i.e. that males are less invested in child rearing than females). It was also found that as rates of polygyny and extrapair sex increased, parental investment by males decreased even further. However, this is not always the case, as findings by Møller and Thornhill (1998) suggest that male birds who have more sexual partners and offspring differ greatly in their level of parental investment. Literature on human male parental-investment across societies, as mentioned above, is sparse, and largely discusses the ideas of EMS and male parental-investment in relation to mate choosiness, male reasoning, and the evolutionary history behind male sexual behaviour (Woodward and Richards 2005; Sell 2011). Apicella and Marlowe (2004) conducted surveys investigating male parental-investment in humans based on perceived mate fidelity and found that if men perceived greater partner fidelity, they were more likely to invest in their children. Their study, however—like the rest of the available literature on humans—did not investigate actual EMS behaviour and male parental-investment as covarying variables. Nonetheless, considering what has already been established about EMS and male parental-investment in nonhuman animal species, as well as the ideas proposed by biological and parental care theories (Puts 2010; Head et al. 2014), my second hypothesis is that in human societies with higher rates of EMS, males will invest less in parental care due to uncertain parentage.

Method

To test my two hypotheses, I used the Standard Cross-Cultural Sample (SCCS). The variables I used to test my first hypothesis on male status and rates of EMS and polygyny in societies were: '*composite of male dominance*' (SCCS v670), '*cultural basis of polygyny*' (SCCS v860) and '*frequency of extramarital sex- male*' (SCCS v170). The independent variable was v670 and the two dependent variables were v860 and v170. In line with sexual selection theory, I chose v670, v860, and v170 as I predicted male dominance to have a positive correlation with rates of polygyny and frequency of EMS.

I ran two separate cross-tabulations on the IBM SPSS Statistics software, leaving v670 in its original form but recoding v860 and v170 so that they were more easily testable. For v860, I recoded similar categories into one category. For example, '*monogamy preferred but exceptional cases of polygyny*' and '*monogamy prescribed*' were grouped together into '*monogamy preferred*', '*polygyny preferred by individual men with leadership attributes*' and '*polygyny preferred by men of a higher social class*' were grouped together into '*polygyny preferred by high-status and powerful men*'. The category

'polygyny preferred by most men' was left unaltered. This created three categories which described the three types of polygyny occurring in the societies recorded in the SCCS. Recoding of similar categories was also done for v170. The categories *'moderate'* and *'occasional'* were regrouped into *'moderate'*, and the categories *'universal'* and *'uncommon'* were left unaltered. This again created three categories which accurately captured the three categories of EMS frequency recorded in the SCCS.

For my second hypothesis on EMS and male parental-investment I used v170 as the independent variable and *'importance of fathers for both boys and girls, without regard to gender'* (SCCS v991) as the dependent variable. I chose these variables as, according to biological theories and previous research on nonhuman animal species, I predicted male parental-investment would decrease as EMS increased, due to a decreased certainty of paternity.

Recoding v170 was done in the same way as for my first hypothesis, which created three categories describing EMS frequencies, *'universal'*, *'moderate'*, and *'uncommon'*. Recoding v991 had to be done in three steps. Firstly, autorecode was used to assign each label a numerical value. The next recode ordered the labels in descending order of frequency, so that *'1'* was *'almost always the major caretaker'*, *'2'* was *'very frequent'*, and so on until *'7'* which was *'rarely'*. The last recode for v991 grouped similar categories together. *'1'* became *'very frequently primary caregiver'* and consisted of the three most frequent occurrences (*'almost always the major caretaker'*, *'very frequent'* and *'frequently the major caretaker'*), *'2'* became *'sometimes primary caregiver'* and consisted of the three moderate occurrences (*'often'*, *'sometimes the major caretaker'*, and *'occasional'*) and *'3'* was *'rarely'*. After recoding, I ran a cross-tabulation on SPSS comparing v170 and v991. I retained *'missing data'* in its original state for all variables for both hypotheses.

It should also be noted that for v670, I combined the categories *'mythical male'* and *'sexes unequal'* after obtaining the SPSS cross-tabulation output. I did this to make the results of the cross-tab easier to interpret. Author of the variable, Peggy Sanday (1981), describes *'mythical male'* dominance as occurring in societies in which male aggression exists in conjunction with economic and/or political power by women. Societies such as these therefore may outwardly appear to have equality between men and women, but in actuality, men hold more formal power and authority. Additionally, even if male dominance is merely a perpetuating myth in those societies, it should still be enough for females to view high-status males as more desirable. Therefore, I combined *'mythical male'* and *'sexes unequal'* rather than *'mythical male'* and *'sexes equal'*.

Results

The first cross-tabulation compared the variables for male dominance and cultural basis of polygyny. As shown in Figure 3.1, a total of 138 societies of the 186 included in the SCCS had sufficient data for both variables and were therefore included in the cross-tab. The columns represent the number of societies in which polygyny or monogamy was preferred by males. In societies where sexes were unequal, i.e. male-dominated (67 per cent of the total 138 societies), there was almost three times more polygyny occurring amongst high-status and powerful males than in societies where the sexes were equal. Polygyny was preferred by 73 per cent of male-dominated societies compared to 53 per cent of equal-sex societies. Within male-dominated societies, 27 per cent preferred monogamy compared to 47 per cent of equal-sex societies. Furthermore, in male-dominated societies, there was a greater preference for polygyny amongst all males in general, high-status or not.

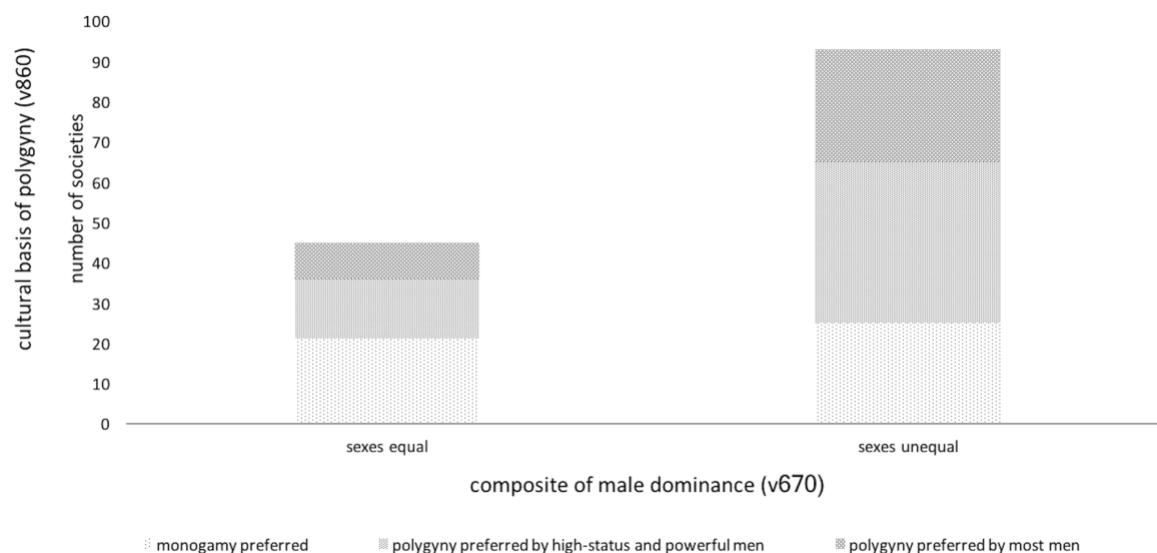


Figure 3.1. Preference for polygyny in societies

Source: Pre-coded variables for the Standard Cross-Cultural sample (Volume 1)

In regards to male dominance and frequency of extramarital sex, there was only 45 societies from the SCCS which had recorded data for both variables. The output of the cross-tab between v670 and v170 can be found in Figure 3.2. The columns represent the number of societies in which EMS was present. Broadly speaking, the results of the cross-tab show that there is a higher frequency of EMS in societies which are male-dominated. Out of the 45 societies in the cross-tab, 64 per cent were male-dominated. ‘*Universal*’, ‘*moderate*’, and ‘*uncommon*’ frequencies of EMS were all higher in male-dominated societies. Within equal-sex societies, 81 per cent had ‘*universal*’ or ‘*moderate*’ frequencies of EMS compared to 76 per cent of male-dominated societies.

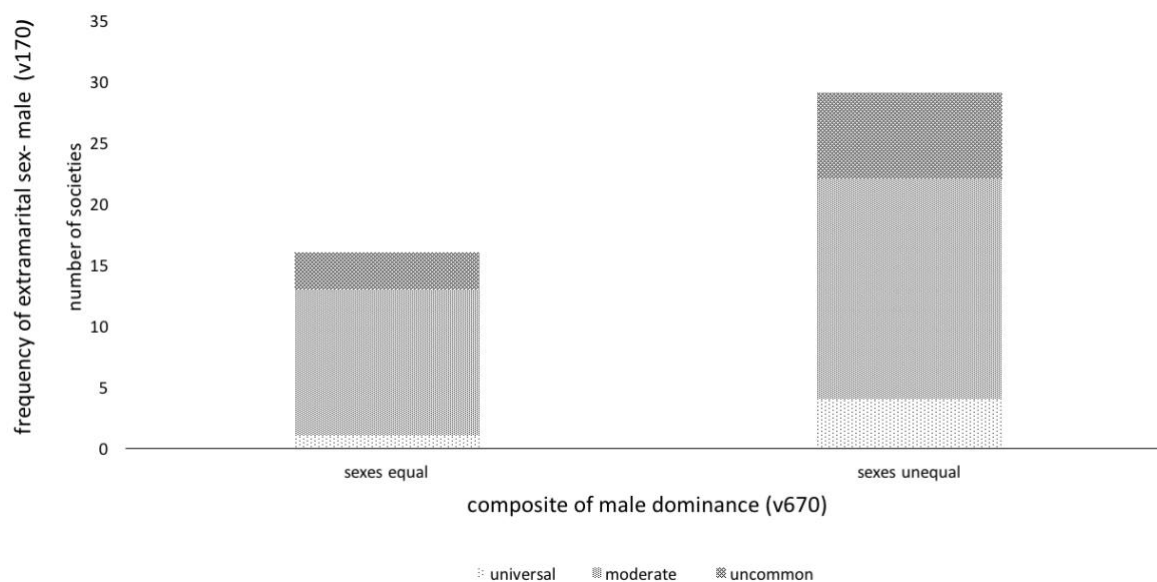


Figure 3.2. Frequency of male extramarital sex in societies

Source: Pre-coded variables for the Standard Cross-Cultural sample (Volume 1)

For my second hypothesis—which investigated the relationship between EMS and male parental-investment—the results of the cross-tab are shown in Table 3.1. There were only 24 societies that had sufficient data for both variables. When frequency of EMS was universal in a society, males were much less likely to ‘*very frequently*’ or ‘*sometimes*’ be the primary caregiver when compared to moderate levels of EMS. There does not appear to be a significant relationship between rates of EMS and male parental-investment.

Table 3.1: Cross-tabulation of 'frequency of extramarital sex-male' (v170) and 'importance of fathers for boys and girls' (v991)

male parental-investment	male extramarital sex			total
	universal	moderate	uncommon	
very frequently primary caregiver	2	8	1	11
sometimes primary caregiver	1	7	1	9
rarely primary caregiver	1	2	1	4
total	4	17	3	24

Source: Pre-coded variables for the Standard Cross-Cultural Sample (Volume I)

Discussion

My first hypothesis predicted that if males in a society have more status and power than females in the same society, the more EMS and cases of polygyny will be found amongst males, due to a more favourable perception by females of their virility and potential as a mate. The results of the cross-tab between the relevant SCCS variables appear to support this hypothesis. As depicted in Figure 3.1, not only were there more male-dominated societies than equal-sex societies, there was also a higher preference for polygyny—especially amongst high-status and powerful males in male-dominated societies. Monogamy was also the least preferred marriage style. In equal-sex societies, monogamy was preferred over polygyny. The results show that for both male-dominated and equal-sex societies, high-status and powerful males had a higher preference for polygyny. This suggests that my prediction that females will have a more favourable perception of high-status and powerful males—resulting in the males having more sexual partners—may be correct. This is in accordance with sexual selection theory, which states that certain characteristics may make individuals more attractive to members of the opposite sex, resulting in more reproductive opportunities.

However, the variables I tested do not necessarily prove that positive female perceptions of high-status and powerful males are the reason behind those males' high preference for polygyny. Rather, it could be due to females having less of a choice when being pursued by high-status and powerful males, or high-status and powerful males may themselves put in more effort to obtain more reproductive mates. Furthermore, the SCCS variable '*cultural basis of polygyny*' measured polygyny *preferences*, not actual polygynous *behaviours*.

Figure 3.2 shows that '*universal*', '*moderate*', and '*uncommon*' occurrences of EMS in male-dominated societies were more frequent than in equal-sex societies. Surprisingly—although a small difference—76 per cent of male-dominated societies (compared to 81 per cent of equal-sex societies) had '*universal*' or '*moderate*' occurrences of EMS. This disparity could be accounted for by the fact that there were many more societies in the male-dominated category, giving a more varied distribution of results. The findings obtained from testing my first hypothesis are comparable to the findings by Puts (2010), Lammers et al. (2011), and Hill et al. (2013) that were discussed in the introduction.

The result associated with my second hypothesis—which predicted that in societies with higher rates of EMS, males will invest less in parental care due to uncertain paternity—was inconclusive. The results presented in Table 3.1 show that when EMS was universal there was little parental investment by males, as predicted. However, the greatest amount of male parental-investment occurred in societies where there were moderate amounts of EMS, rather than when EMS was uncommon (as my hypothesis predicted). Therefore, the results of the cross-tab are conflicting and my hypothesis is neither supported nor unsupported. Data from more societies around the world would make any correlation between EMS and male parental-investment more distinct. Although my findings are mostly inconsistent with previous studies that have found an inverse relationship between EMS and male parental-investment (Quinlan and Quinlan 2007; Liker et al. 2015), there has been research which does not support the assumption that males are always the less-invested parent, such as that by Møller and Thornhill (1998) discussed earlier. A study of burying beetles (*Nicrophorus vespilloides*) by Head et al. (2014) found

that as certainty of parentage increased, it was parental investment by females which decreased, not parental investment by males. Considering there is conflicting evidence for the relationship between EMS and paternal care in nonhuman animal species, the literature on humans is limited, and as my own findings are inconclusive, further research is needed to investigate these two variables in human societies.

One potential explanation for the inconclusive findings from my second hypothesis is that I may have used an unsuitable variable from the SCCS to test male parental-investment. The data presented in the variables '*role of father, infancy*' (SCCS v53) and '*role of father, early childhood*' (SCCS v54) show that as a child grows, fathers are more likely to spend more time with their children. This could be because as certainty of parentage increases (i.e. the child begins to look more like his or her parents) males are more likely to invest in their children. A cross-tab between v53, v54, and v170 may have yielded more substantial and definitive results.

Future research could expand upon my second hypothesis and investigate, on a larger and more comprehensive scale, if biological and parental-care theories apply to humans as they have been found to apply to nonhuman animal species (Liker et al. 2015). It would also be interesting to see if Lammers et al.'s (2011) finding that women in positions of power engage in just as much EMS as males in positions of power can be replicated through data recorded in the SCCS. The variables that could be used to test that prediction include '*polygamy*' (SCCS v79), '*frequency of extramarital sex- female*' (SCCS v171), and '*female power guttman scale*' (SCCS v663). Another intriguing area of research is the role attractiveness plays in mating behaviour. Rhodes et al. (2005) found that facial and body attractiveness meant an individual had more short-term sexual partners, particularly males. Future research could explore the relationship between attractiveness, number of sexual partners, and male status and/or power. It can be reasonably assumed that males who are both attractive and high-status and/or powerful will have the greatest number of sexual interactions and engage in the most amount of EMS and polygyny.

In conclusion, my hypothesis that higher levels of male status and power will lead to higher levels of polygyny and EMS was supported by data obtained from the SCCS. My second hypothesis that higher levels of male EMS would lead to less male parental-investment was inconclusive. Statistical tests could have helped prove whether any correlations between the variables tested were significant. Nonetheless, my findings have helped solidify previous research findings regarding male power and status, polygyny, and EMS, and have demonstrated that further research is needed in exploring the application of biological theories to human male parental-investment.

References

- Apicella C, Marlowe F. 2004. Perceived mate fidelity and paternal resemblance predict men's investment in children. *Evol Hum Behav.* 25(6):371–378. doi.org/10.1016/j.evolhumbehav.2004.06.003
- Cashdan E. 1996. Women's mating strategies. *Evol Anthropol.* 5(4):134–143. [doi.org/10.1002/\(SICI\)1520-6505\(1996\)5:4<134::AID-EVAN3>3.0.CO;2-G](https://doi.org/10.1002/(SICI)1520-6505(1996)5:4<134::AID-EVAN3>3.0.CO;2-G)
- Head M, Hinde C, Moore A, Royle N. 2014. Correlated evolution in parental care in females but not males in response to selection on paternity assurance behaviour. *Ecol Lett.* 17(7):803–810. doi.org/10.1111/ele.12284
- Hill A, Hunt J, Welling L, Cardenas R, Rotella M, Wheatley J, Dawood K, Shriver M, Puts D. 2013. Quantifying the strength and form of sexual selection on men's traits. *Evol Hum Behav.* 34(5):334–341. doi.org/10.1016/j.evolhumbehav.2013.05.004
- Hill E, Nocks E, Gardner L. 1987. Physical attractiveness: Manipulation by physique and status displays. *Ethol Sociobiol.* 8 (2):143–154. [doi.org/10.1016/0162-3095\(87\)90037-9](https://doi.org/10.1016/0162-3095(87)90037-9)
- Hosken D, House C. 2011. Sexual selection. *Curr Biol.* 21(2):R62–R65. doi.org/10.1016/j.cub.2010.11.053
- Lammers J, Stoker J, Jordan J, Pollmann M, Stapel D. 2011. Power increases infidelity among men and women. *Psychol Sci.* 22(9):1191–1197. doi.org/10.1177/0956797611416252

- Leung K, Li F, Zhou F. 2012. Sex differences in social cynicism across societies: The role of men's higher competitiveness and male dominance. *J Cross Cult Psychol.* 43(7):1152–1166. doi.org/10.1177/0022022111422259
- Liker A, Freckleton RP, Remes V, Szekely T. 2015. Sex differences in parental care: Gametic investment, sexual selection, and social environment. *Evolution.* 69(11):2862–2875. doi.org/10.1111/evo.12786
- Møller A, Thornhill R. 1998. Male parental care, differential parental investment by females and sexual selection. *Animal Behav.* 55(6):1507–1515. doi.org/10.1006/anbe.1998.0731
- Puts D. 2010. Beauty and the beast: Mechanisms of sexual selection in humans. *Evol Hum Behav.* 31(3):157–175. doi.org/10.1016/j.evolhumbehav.2010.02.005
- Quinlan RJ, Quinlan MB. 2007. Parenting and cultures of risk: A comparative analysis of infidelity, aggression, and witchcraft. *Am Anthropol.* 109(1):164–179. doi.org/10.1525/aa.2007.109.1.164
- Rhodes G, Simmons L, Peters M. 2005. Attractiveness and sexual behavior: Does attractiveness enhance mating success? *Evol Hum Behav.* 26(2):186–201. doi.org/10.1016/j.evolhumbehav.2004.08.014
- Sanday P. 1981. *Female power and male dominance: On the origins of sexual inequality.* 1st ed. Cambridge (UK): Cambridge University Press.
- Sell N. 2011. A reexamination of the nature of male parental investment. *Nebraska Anthropologist.* 26:147–156.
- Woodward K, Richards M. 2005. The parental investment model and minimum mate choice criteria in humans. *Behav Ecol.* 16(1):57–61. doi.org/10.1093/beheco/arh121